

U.S. Fertility Clinics & Infertility Services: An Industry Analysis

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<u>Nature & Structure of the Industry</u>	24-41
* Definition of market segments (IVF ART clinics, sperm banks, egg donors, fertility drugs, surrogacy programs, surgeries)	
* Industry evolution – when clinics first appeared	
* Market demand and potential: Number and percent of women of childbearing age infertile, increase in IVF procedures from 1987-2019, reasons for growth, past estimates of industry size	
* Number of IVF clinics by: hospital-based vs. independents	
* Insurance coverage: typical fees and client affordability, state mandated coverage, financing	
* Causes of infertility: discussion of main reasons for infertility in men and women, treatment methods (HSG procedures, lap and dye procedures – description, cost, estimated number of procedures). Tubal reversal surgeries (description of, success rates, costs, percent of women having procedure, estimated number of surgeries).	
* IVF procedures: discussion of procedure, cost. GIFT procedures: discussion of procedure, cost, number of procedures.	

Patient Demographics

42-49

- * U.S. birth & fertility rates: data – report highlights regarding number of births, total births in the United States, crude birth rate, general fertility rate
- * Americans' use of fertility services: demographics and characteristics
- * Chinese couples demand for U.S. fertility services, discussion, IVF tourism trends by European couples
- * Summary and discussion of number and percent of infertile female population in the U.S. (U.S. Census Bureau data, American Society for Reproductive Medicine)
- * Reasons why the market is largely untapped: how price deters most candidates
- * Delayer boom: more educated women have children later in life

Tables:

- Number of U.S. births and general fertility rate

Industry Size and Growth

50-74

- * Summary and Analysis; historical estimates of industry size – 1988,1995, 2000 (gov't. & private sources)
- * Marketdata estimate of mkt. size in 1999, by diagnostic procedure, IVF, drugs, surgeries
- * Harvard Business School estimate for 2004
- * Discussion of no. of **IVF clinics** 1985-2018, avg. revenues, value of this market segment
- * **2016-2019 market performance:** estimated growth, pricing, IntegraMed revenues.
- * **2020 Outlook & Forecasts** -: discussion of likely effects of Coronavirus and clinic closures, state guidelines re “essential” services (IL, NY, NJ, MD, MA, CA), estimates of no. of clinics closed, phased re-openings, Marketdata forecast of ART cycles volume decline, revenue decline, \$ value of the market.
- * **2021-2025 Forecast:** Factors affecting current and future industry growth: IVF tourism, what the economic recovery may look like, improved success rates, gay/lesbian use of IVF, etc.
- ***Status of the European and Chinese Markets**, discussion, reasons for coming to U.S. clinics, report of ESHRE, IVF volume, percent distribution of IVF vs. ICSI, which nations infertile couples come from, China status report, estd. size of fertility market and \$ spent abroad.

Tables:

- Historical \$ Size of fertility services industry – 1995-2019: diagnostic & therapeutic procedures (no. performed, avg. cost, estd. \$ value: office consultations, semen analysis, hormone evaluations, tubal reversals, IVF & GIFT procedures, fertility drugs, donor eggs, donor sperm, surrogacies)
- Size of fertility treatment industry: 2004 (Debra Spar, Harvard Business School book)
- No. of clinics, ART procedures performed, revenues: 1985-2019 (CDC data)
- Top 22 U.S. fertility clinics/chains, by no. of IVF cycles performed and revenues: 2017
- Top 22 U.S. fertility clinics, by no. of IVF cycles performed and revenues: 2014
- No. of ART cycles performed, % change: 1997-2025 forecast
- Demand for assisted reproductive technology in China - infographic
- Size of fertility services industry – 2012 vs. 2008: diagnostic & therapeutic procedures (no. performed, avg. cost, estd. \$ value) – breakdowns as above
- Estimated historical size of mkt., by segment: 1988, 1995, 2000, 2004, 2006, 2008, 2012
- No. of ART cycles performed in various European nations: 1997-2009.

Sperm Banks

- * Summary and discussion: number of U.S. sperm banks, typical fees, main activities
- * How the process works: requirements and screening of sperm donors, who typical donors are, fees, contracts
- * Estimated value of the market: 2004 – 2025 F
- * Market trends – why market is flat, gray market sperm
- * Major competitor Profiles: Cryos International Sperm Bank (Denmark), California Cryobank – typical procedures and requirements of donors, findings of phone interview

Egg Donor Market

- * Discussion of egg donors, frozen embryo replacement, fees, who they are, differentiated pricing structure, estimated market value: why this is a strong growth market, foreign demand, market size: 2004-2023 Forecast.
- * Analysis of egg donation data from 2017 CDC ART report, Marketdata's mkt. size estimates for 2019, 2020, 2025
- * Discussion of European mkt. report about social egg freezers, low rate of thawing.

Surrogacy Programs: Discussion of the need for it, mkt. size, fees, etc.

The Fertility Drugs Market

- * Summary of the U.S. & global fertility drugs market: estimated size, key competitors (Organon, Merck Serono, Ferring)
- * Outlook and Gonal-f 2018-2019 sales from Merck's annual reports for North America versus rest of world, outlook for Gonal-f and Pergoveris
- * Estimated market share for Merck Serono, \$ sales
- * Discussion of increase in illicit drug market developing between buyers and sellers
- * Marketdata estimates of fertility drug sales: 1995 – 2025 F, five year forecast

Findings of 2016-2018 CDC ART Surveys on Assisted Reproductive Technology

- * Findings of 2017 survey & preliminary 2018 data: success rates, by age of woman, fresh & frozen embryos from nondonor eggs, donor eggs, percent of clinics offering services by type.
- * Discussion/analysis of: type ART procedure used, pregnancy success rates, ART cycles using frozen embryos, ART cycles using donor eggs, ART cycles using nondonor eggs and embryos, success rates by women's age

Tables and analyses of 2016 report: National Summary

- * Total no. of ART procedures performed, % by type.
- * No. of infants born through ART
- * Percent multiple birth deliveries
- * Percent of ART transfers resulting in a pregnancy.
- * Age distribution of patients undergoing fresh IVF cycles: 2014

Text, analyses & discussion covering these topics: (long-term trend data)

- How old were women who used ART?
- How did the types of ART cycles performed differ by a woman's age?
- How many frozen egg cycles were conducted and what were the outcomes of these cycles?
- Why were some ART cycles canceled?
- What percentage of ART cycles resulted in a pregnancy?
- What percentage of ART pregnancies resulted in a live birth?

- What percentage of ART cycles resulted in a multiple-fetus pregnancy or multiple-infant birth?
- How did the percentage of ART cycles that resulted in pregnancies, live births, and births of single live infants differ among women aged 40 or older?
- How did a woman's age affect ART cycle progress and outcomes?
- How did previous birth impact ART live-birth outcomes?
- How did previous unsuccessful ART use impact ART live-birth outcomes among women with no previous births?
- Did the use of ICSI differ by age group or by male factor infertility diagnosis?
- How many embryos were typically transferred in an ART procedure?
- Did the number of embryos transferred impact the percentage of single, term, and normal birth weight infants born?
- How long after egg retrieval did embryo transfer occur?
- What percentage of ART cycles resulted in a multiple-fetus pregnancy or multiple-infant birth?
- Was the use of donor eggs or embryos higher among older women undergoing ART?
- What are egg/embryo banking cycles and have they increased?
- Has the number of cycles using donor eggs or embryos increased?
- Is the use of ART increasing? Is the use of ICSI increasing?
- Have there been changes in the type of ART cycles performed among women who used fresh or frozen nondonor eggs or embryos?
- Has the no. of embryos transferred in fresh non-donor cycles changed?
- Has the no. of embryos transferred in each ART cycle changed?
- Have there been improvements in ART success rates by no. of embryos transferred?
- Has the % of multiple-infant live births changed?
- Has the % of singletons, twins and triplets or more changed for ART cycles using fresh non-donor eggs or embryos?

Competitor Profiles

120-141

Summary: discussion of consolidation, how larger clinics are capturing greater share of the market, Growth rate of no. of IVF cycles performed.

Tables:

- Ranking of top 22 IVF clinics, by no. of cycles performed: 2006, 2010, 2011, 2014, 2016, 2017
- Ranking of top 22 IVF clinics, by. no. of cycles performed and estd. revenues per clinic in 2017

Descriptions of activities, specialties, mission, revenues if available, address, for:

- Resolve
- Allan Guttmacher Institute
- Genetics and IVF Institute
- IntegraMed America, Inc.
- Prelude Fertility

List of recent fertility start-up companies.

Industry Reference Directory

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* List of adoption and fertility services industry trade groups, associations, surveys, consultants, articles, and other sources.

